**DS Algo Essentials | December 2020**

**Assignment Day 1 | 24th December 2020**

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**Question 1 :**

**Write the program for deleting an element from the beginning and from any position.**

**A ) Write the program for deleting an element from the beginning**

**Code :**

**#include <stdio.h>**

**int main()**

**{**

**int a[20],p,i,n;**

**printf("Enter the number of Elements in an array\n");**

**scanf("%d",&n);**

**printf("Enter the elements...\n");**

**for(i=0;i<n;i++)**

**scanf("%d",&a[i]);**

**printf("Resultant array after deleting the first element in the array:\n");**

**//for (i=n;i<0;i++)**

**//printf("%d\n",a[i]);**

**for (i=1;i<n;i++)**

**printf("%d\n",a[i]);**

**}**

**B ) Write the program for deleting an element from any position.**

**Code :**

**#include <stdio.h>**

**int main()**

**{**

**int a[20],p,i,n;**

**printf("Enter the number of Elements in an array\n");**

**scanf("%d",&n);**

**printf("Enter the elements...\n");**

**for(i=0;i<n;i++)**

**scanf("%d",&a[i]);**

**printf("Enter the index position where you wish to delete the element\n");**

**scanf("%d",&p);**

**if (p>= n+1)**

**printf("Deletion is not possible\n");**

**else**

**{**

**for(i=p-1;i<n-1;i++)**

**a[i]=a[i];**

**printf("Resultant array:\n");**

**for (i=0;i<n-1;i++)**

**printf("%d\n",a[i]);**

**}**

**return 0;**

**}**

**Question 2 :**

**Write the program for printing the array after rotating it k times towards left, where k would be taken as user input.**

**Code :**

**#include <stdio.h>**

**void print(int arr[]);**

**void rotate(int arr[]);**

**int main()**

**{**

**int i,n;**

**int arr[10];**

**printf("Enter 10 elements array:\n");**

**for(i=0;i<10;i++)**

**{**

**scanf("%d",&arr[i]);**

**}**

**printf("Enter number of times to left rotate:\n");**

**scanf("%d",&n);**

**n=n%10;**

**printf("Array before rotation:\n");**

**print(arr);**

**for(i=1;i<=n;i++)**

**{**

**rotate(arr);**

**}**

**printf("\nArray after rotation\n");**

**print(arr);**

**return 0;**

**}**

**void rotate(int arr[])**

**{**

**int i,first;**

**first = arr[0];**

**for(i=0;i<9;i++)**

**{**

**arr[i] = arr[i + 1];**

**}**

**arr[9] = first;**

**}**

**void print(int arr[])**

**{**

**int i;**

**for(i=0;i<10;i++)**

**{**

**printf("%d ", arr[i]);**

**}**

**}**